

AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for dissolving lignocellulosic material comprising:
providing a lignocellulosic material of untreated straw or untreated wood wherein the wood structure including the cell wall structure is intact and which has not been subjected to a pulping or defibering process;

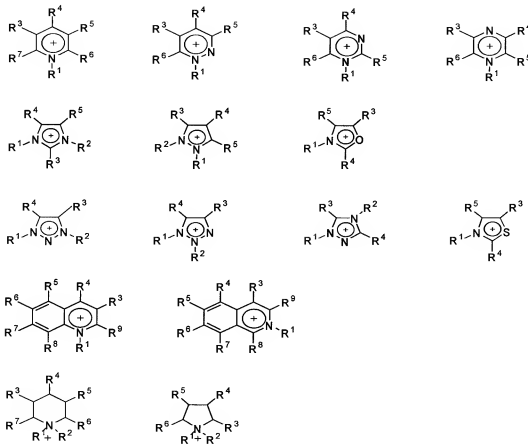
mixing the lignocellulosic material with an ionic liquid solvent; and
subjecting the lignocellulosic material to ~~under~~ microwave irradiation ~~and/or under pressure~~ in the substantial absence of water to completely dissolve the lignocellulosic material.

2. (cancelled).

3. (original) The method according to claim 1 wherein pressure is applied to assist in dissolution.

4. (original) The method according to claim 1 wherein the ionic liquid solvent is molten at a temperature of below 200°C.

5. (original) The method according to claim 1 wherein the cation of the ionic liquid solvent is selected from the group consisting of



wherein R^1 and R^2 are independently a C_1 - C_6 alkyl or C_2 - C_6 alkoxyalkyl group, and R^3 , R^4 , R^5 , R^6 , R^7 , R^8 and R^9 are independently hydrogen, a C_1 - C_6 alkyl, C_2 - C_6 alkoxyalkyl or C_1 - C_6 alkoxy group, and wherein the anion of the ionic liquid solvent is halogen, pseudohalogen or C_1 - C_6 carboxylate.

6. (original) The method according to claim 5 wherein said cation comprises



wherein R^3 - R^5 are hydrogen and R^1 and R^2 are the same or different and represent C_1 - C_6 alkyl, and said anion is halogen, preferably chloride.

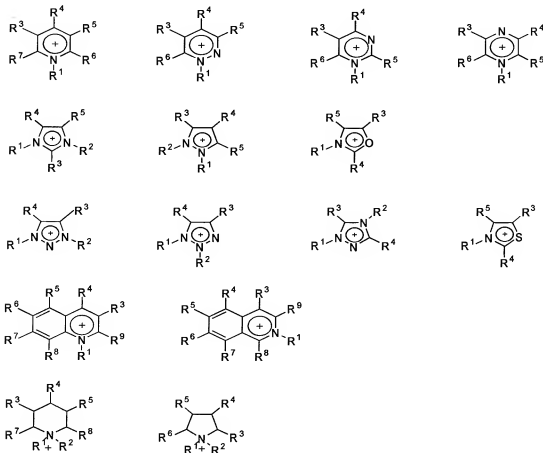
7. (cancelled).

8. (cancelled).

9. (currently amended) A solution comprising dissolved lignocellulosic material of untreated straw or untreated wood wherein the wood structure including the cell wall structure is intact and which has not been subjected to a pulping or defibering process in an ionic liquid solvent that is substantially free of water to provide a solution wherein lignocellulosic material is present in an amount of about 1% to 30% by weight of the solution.

10. (cancelled).

11. (original) The solution according to claim 9 wherein the cation of the ionic liquid solvent is selected from the group consisting of



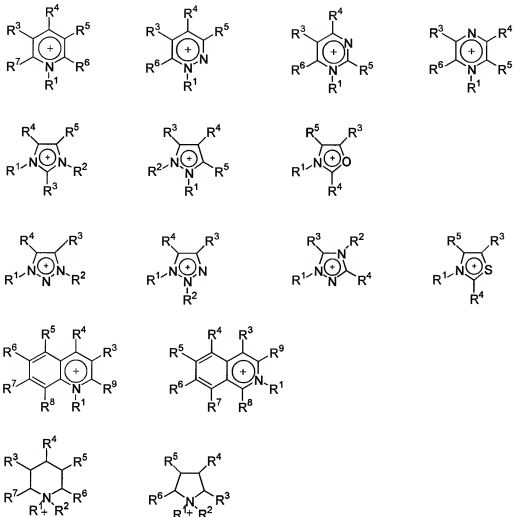
wherein R¹ and R² are independently a C₁-C₆ alkyl or C₂-C₆ alkoxyalkyl group, and R³, R⁴, R⁵, R⁶, R⁷, R⁸ and R⁹ are independently hydrogen, a C₁-C₆ alkyl, C₂-C₆ alkoxyalkyl or C₁-C₆ alkoxy group, and wherein the anion of the ionic liquid solvent is halogen, pseudohalogen or C₁-C₆ carboxylate.

12. (currently amended) A method for separating cellulose from a lignocellulosic material of untreated straw or untreated wood wherein the wood structure including the cell wall structure is intact and which has not been subjected to a pulping or defibering process comprising mixing the lignocellulosic material with an ionic liquid solvent under microwave irradiation and/or under pressure in the substantial absence of water to completely dissolve the lignocellulosic material, thereby obtaining a solution of the lignocellulosic ~~material~~, material from which lignin may be removed, and thereafter precipitating the cellulose by adding a non-solvent for the cellulose.

13. (cancelled).

14. (original) The method according to claim 12 wherein said non-solvent for the ionic liquid solvent is water, an alcohol, a ketone or an ether.

15. (original) The method according to claim 12 wherein the cation of the ionic liquid solvent is selected from the group consisting of

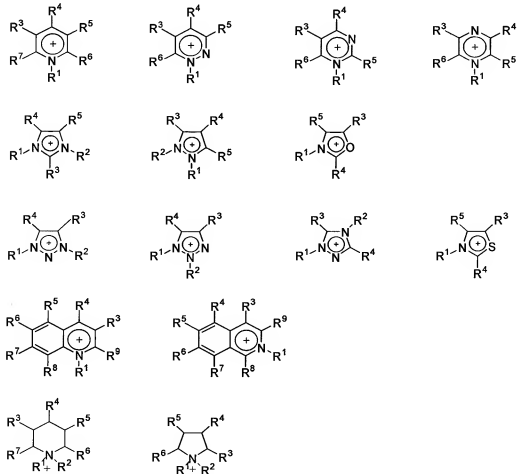


wherein R^1 and R^2 are independently a C_1 - C_6 alkyl or C_2 - C_6 alkoxyalkyl group, and R^3 , R^4 , R^5 , R^6 , R^7 , R^8 and R^9 are independently hydrogen, a C_1 - C_6 alkyl, C_2 - C_6 alkoxyalkyl or C_1 - C_6 alkoxy group, and wherein the anion of the ionic liquid solvent is halogen, pseudohalogen or C_1 - C_6 carboxylate.

16. (currently amended) A method for the delignification of a lignocellulosic material of untreated straw or untreated wood wherein the wood structure including the cell wall structure is intact and which has not been subjected to a pulping or defibering process comprising mixing the lignocellulosic material with an ionic liquid solvent under microwave irradiation and/or under pressure in the substantial absence of water to completely dissolve the lignocellulosic material,

thereby obtaining a solution of the lignocellulosic material, and thereafter subjecting the solution to extraction to separate lignin from the solution.

17. (original) The method according to claim 16 wherein the cation of the ionic liquid solvent is selected from the group consisting of



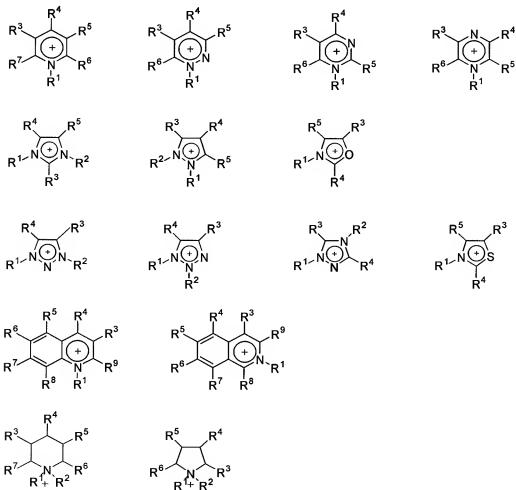
wherein R^1 and R^2 are independently a C_1 - C_6 alkyl or C_2 - C_6 alkoxyalkyl group, and R^3 , R^4 , R^5 , R^6 , R^7 , R^8 and R^9 are independently hydrogen, a C_1 - C_6 alkyl, C_2 - C_6 alkoxyalkyl or C_1 - C_6 alkoxy group, and wherein the anion of the ionic liquid solvent is halogen, pseudohalogen or C_1 - C_6 carboxylate.

18. (currently amended) A method for the separation of extractives or a component thereof from a lignocellulosic material of untreated straw or untreated wood wherein the wood structure including the cell wall structure is intact and which has not been subjected to a pulping or defibering process comprising

mixing the lignocellulosic material with an ionic liquid solvent under microwave irradiation and/or under pressure in the substantial absence of water to completely dissolve the lignocellulosic material, thereby obtaining a solution of the lignocellulosic material, and thereafter separating the extractives or a component thereof from said solution by extraction or by distillation.

19. (cancelled).

20. (original) The method according to claim 18 wherein the cation of the ionic liquid solvent is selected from the group consisting of



wherein R¹ and R² are independently a C₁-C₆ alkyl or C₂-C₆ alkoxyalkyl group, and R³, R⁴, R⁵, R⁶, R⁷, R⁸ and R⁹ are independently hydrogen, a C₁-C₆ alkyl, C₂-C₆ alkoxyalkyl or C₁-C₆ alkoxy

group, and wherein the anion of the ionic liquid solvent is halogen, pseudohalogen or C₁-C₆ carboxylate.